

Understanding and overcoming negative impacts of tourism in city destinations: conceptual model and strategic framework

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Abstract

Purpose – The purpose of this paper is to clarify the mechanisms of conflict between residents and tourists and to propose a conceptual model to assess the impact of such conflicts on city tourism and to suggest a framework to develop strategies to deal with such conflicts and mitigate negative impacts.

Design/methodology/approach – Based on desk research a conceptual model was developed which describes the drivers of conflicts between residents and visitors. Building blocks of the model are visitors and their attributes, residents and their attributes, conflict mechanisms and critical encounters between residents and visitors, and indicators of the quality and quantity of tourist facilities. Subsequently the model was used to analyse the situation in Hamburg. For this analysis concentration values were calculated based on supply data of hotels and AirBnB, app-data, and expert consultations.

Findings – The study shows that in Hamburg there are two key mechanisms that stimulate conflicts: (1) the number of tourists in relation to the number of residents and its distribution in time and space; (2) the behaviour of visitors measured in the norms that they pose onto themselves and others (indecent behaviour of tourists).

Research limitations/implications – The model that was developed is a conceptual model, not a model with which hypotheses can be tested statistically. Refinement of the model needs further study.

Practical implications – Based on the outcomes of the study concrete strategies were proposed with which Hamburg could manage and control the balance of tourism.

Originality/value – City tourism has been growing in the last decades, in some cases dramatically. As a consequence, conflicts between tourists, tourism suppliers and inhabitants can occur. The rise of the so-called sharing economy has recently added an additional facet to the discussion. The ability to assess and deal with such conflicts is of importance for the way city tourism can develop in the future. This study is an attempt to contribute to the understanding of the mechanism behind and the nature of those conflicts, and the way they can be managed and controlled. Besides it illustrates how data generated by social media (apps) can be used for such purposes.

Keywords City tourism, Conflict mechanisms, Host-guest relations, Overtourism, Tourism impact studies, Visitor management

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Introduction

Tourism is subject to massive growth. Projections made by the World Tourism Organisation anticipate a growth to 1.8 billion international arrivals worldwide till 2030. Based on its World Tourism Monitor, IPK states that city tourism is the fastest growing market segment in tourism (IPK International, 2016). The direct and indirect effects of this increase in visitor numbers seem to cause an increase in annoyance among residents, which could lead to conflicts between tourists, tourism suppliers and inhabitants. The rise of the so-called sharing economy has recently added an additional facet to the discussion. During the past few years various media have reported on incidents, residents protests and the like. However, the humming-up of media may occasionally obscure the difference between actual conflicts perceived in the population and what interested actors in the media make of it. Here, only a careful analysis of the actual

situation would help. On the other hand, such conflicts and the discussion about it are neither new nor limited to large cities. Yet, the focus of the discussion has shifted over the last decades: from tourism to developing countries, residents of villages in the Alps which have found themselves into ski-circuses, or greenlanders suffering from the rush of cruise ships. Recently, the discussion has shifted to where a large proportion of tourists go: from and to the European cities. Data from the German Reiseanalyse, an annual survey on holiday travel in Germany (Schmücker *et al.*, 2016), suggest that in 2014, 31 per cent of the population and 33 per cent of German holiday makers were at home in cities with more than 100,000 inhabitants. In the cities, holiday travel is more than 80 per cent higher than in the countryside.

Tourism generates income and employment for cities, and thanks to tourism the liveliness and liveability in cities is boosted because many shops, services and facilities would not exist without that additional customer base. However, with an eye on the (social) sustainability of city tourism development, it is important to understand whether and how residents' annoyance comes about and with which measures residents' attitude could be kept within the margins of their tolerance level. Postma (2013) studied residents' experiences with tourism in four tourism destinations. He identified three categories of so called "critical encounters", four levels of annoyance, four levels on tolerance, and three levels of loyalty towards tourism development. The European Tourism Futures Research Network did a pilot study in Riga, Berlin and Amsterdam to investigate the applicability of Postma's outcomes in an urban context. When this proved valid, the approach was used by the Dutch Centre of Expertise in Leisure, Tourism and Hospitality (CELTH) in a European study on visitor pressure in the city centres of Copenhagen, Berlin, Munich, Amsterdam, Barcelona and Lisbon. A second phase of this study just started in the Flemish cities of art (Antwerp, Bruges, Ghent, Leuven and Mechelen), Tallin and Salzburg. In this study residents were consulted to identify critical encounters and the support for various kinds of strategies to deal with it. Finally, NIT and ETFI conducted a study in Hamburg addressing these issues in 2015/2016.

The domain of tourism impact studies

The study presented here is an example of a tourism impact study. The domain of tourism impact studies has evolved since the second world war, echoing the development of tourism, its characteristics and its perception. During the first phase (1960-1970) the emphasis of tourism impact studies was on the positive economic impacts of tourism. Tourism was mainly seen as a means to strengthen economies. In the 1970s and 1980s, the focus gradually shifted to the negative social, cultural and environmental impacts. This reflected the growing concern of industrialisation, sustainability and quality of life. Ultimately in the 1980s and 1990s the interest of tourism impact studies moved to integrating the economic perspective with the social and environmental one. Tourism had continued to grow, had become more diffuse, and had become more interconnected with societies and economies. The divide in tourism impact studies between economic and social and environmental perspectives, and the emphasis on tourism and destinations as two different worlds impacting upon each other (nicely illustrated in binary terminology such as host and guest) gradually moved to a growing interest into the multidimensional relation between tourism and communities; the process by which tourism is shaped by the interactions between, tourism, host environments, economy and societies; and the meaning of tourism for society (Postma, 2013; Pizam, 1978; Jafari, 1990, 2005, 2007; Butler, 2004; Hudson and Lowe, 2004; Ateljevic, 2000; Crouch, 1999, 2011; Williams, 2009; Sherlock, 2001). This so called cultural turn in tourism impact studies (Milne and Ateljevic, 2001) opened the door to new research areas raising attention on themes and issues that were largely overlooked or marginalised before (Causevic and Lynch, 2009), for instance, "the multiple readings of local residents while working, living, playing or, in other words, consuming and producing their localities through encounter with tourism" (Ateljevic, 2000, pp. 381-382).

According to Deery *et al.* (2012), tourism impact studies have grown into a massive and mature field of study covering a wide spectrum of economic, social and environmental dimensions. However, Williams asserts that there is still a lack of understanding of the relationship between tourism and destination communities, both because the number of empirical studies, inconclusive or conflicting results of empirical studies, and a contested conceptual basis (Williams, 2009). Postma (2013) confirms that mainstream tourism impact literature does not offer useful theoretical frameworks for tourism impact studies that focus on the tourism community relations.

Sustainable tourism

Although the notion of sustainable development has led to considerable debate since its introduction which in part is due to its vagueness for concrete action, it is incorporated as an important starting point in contemporary policy and planning worldwide. This also applies to tourism, where the basic ideas of sustainable development were gradually translated into the concept of sustainable tourism development. The first ideas were introduced by Krippendorf (1984), and they were elaborated in the Brundtland report (World Commission on Environment and Development, 1987) and the United Nations Conference on Environment and Development in Rio de Janeiro in 1992. The ideas presented in the Rio Declaration on Environment and Development and in Agenda 21 guided the World Conference on Sustainable Tourism in Lanzarote in 1995, where the core principles were established (France, 1997; Martin, 1995). In line with sustainable development, sustainable tourism development tries to establish a suitable balance between economic, environmental and social aspects of tourism development to guarantee its long-term sustainability (World Tourism Organisation, 2004). The World Tourism Organisation's core principles of sustainable tourism development are: to improve the quality of life of the host community; to provide high quality experience for visitors; and to maintain the quality of the environment, on which both the host community and the visitors depend (Mill and Morrison, 2002).

Sustainable development and sustainable tourism development do not aim at prosperity and material gains but primarily at well-being and quality of life (Postma, 2001, 2003; Postma and Schilder, 2007; Jackson, 1989; Burns, 1999). In this view residents should be both the starting point and the checkpoint for tourism policy and planning. As the negative perception of tourism affects the way in which residents perceive their quality of community life (Kim, 2002), the long-term sustainability of tourism might be negatively affected by any impacts from tourism causing irritation, annoyance, or anger among local residents. The threshold level at which enthusiasm and support for tourism turns into irritation could be regarded as an indicator of the edge of sustainable development. Therefore, sustainable tourism development requires both greater efforts to incorporate the input of residents in the planning process both in communities exposed to tourism for the first time and in established destinations experiencing increased volumes of tourists (Burns and Holden, 1997; Harrill, 2004), as well as to studying host community attitudes and the antecedents of residents' reactions (Zhang *et al.*, 2006). As Haywood (1988) states: "Local governments should be more responsible to the local citizens whose lives and communities may be affected by tourism in all its positive and negative manifestations" (in Burns and Holden, 1997).

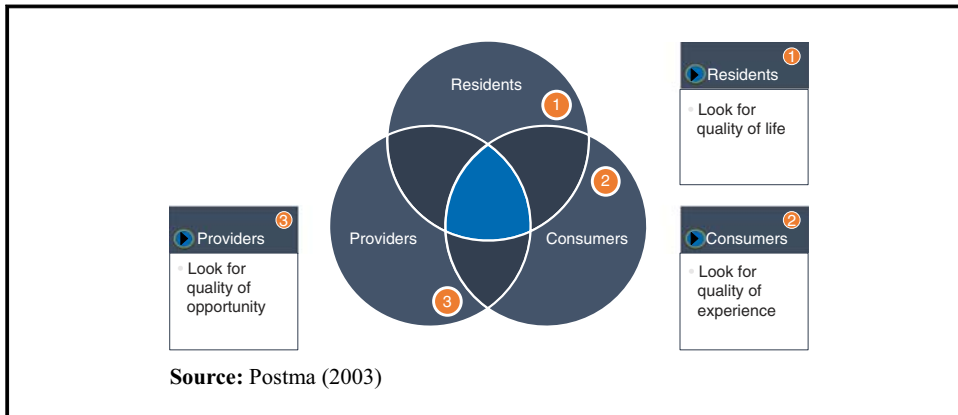
Thus, understanding current and potential conflicts between residents and tourists is an integral part of the sustainable tourism debate. By definition, sustainable tourism development does have an ecological, economic and social dimension. It may be argued that the inclusion of the needs of the inhabitants stimulates the traditional understanding of a tourism market between buyers and sellers: while consumers look for tourism experiences and providers look for business opportunities, the claims of residents are more extensively focussed on an adequate quality of life (Postma, 2003). The larger the interfaces between these three stakeholder groups, the more conflict-free tourism will be able to develop (Figure 1).

For (city) tourism, it seems advisable to define the concept of sustainability in a broad and comprehensive way. Sustainable tourism thus entails "acceptance by the population", and the population is clearly a part of the social dimension. The participation of the population and securing/increasing the acceptance of tourism is therefore also one of the objectives for Hamburg's sustainable tourism development. To develop tourism in a sustainable way, in Hamburg as in other cities, the challenge is to bring the quality of life demands of the inhabitants (social dimension) and the quality-of-opportunity requirements of the providers (economic dimension) as far as possible into line.

The case of Hamburg

The aim of this viewpoint paper is to contribute to the conceptualisation of tourism community relations and to clarify the mechanisms of conflict between residents and tourists and to propose a conceptual model to assess the impact of such conflicts on city tourism and to suggest a

Figure 1 Quality of life: equal demands on tourism



framework to develop strategies to deal with such conflicts and mitigate negative impacts. This model was developed for a study in Hamburg that addressed the balanced and sustainable growth of tourism in the city. Hamburg is one of the most popular city destinations in Germany. The city, located in the north of the country, is faced with a gradual increase of visitor numbers, especially during the past few years. Internal papers of Hamburg's Destination Management Organisation, Hamburg Tourismus (HHT, 2015), show that between 2001 and 2015, the number of overnight stays in Hamburg increased with over 150 per cent, which is more than, for example, Barcelona (+112 per cent), Venice (+120 per cent), Amsterdam (+54 per cent) and Berlin (+153 per cent). Although the negative implications of tourism are not as visible as in some other European cities, critiques are getting louder in selected parts of the city, as shown by a regular resident monitoring implemented by HHT. Strategies to distribute tourism flows in time and space could help to prevent or to counteract. The study, commissioned by HHT, is an attempt to contribute to the understanding of the mechanisms behind and the nature of possible conflicts between tourists, tourism suppliers and residents and the way they can be managed and controlled, for example, by making use of data generated by social media. Based on desk research, a conceptual model was developed which describes the drivers of conflict between residents and visitors. Building blocks of the model are visitors and their attributes, residents and their attributes, conflict mechanisms and areas of conflict between both parties, and indicators of quality and quantity of tourist facilities. Subsequently the model was used to analyse the situation in Hamburg.

Conflict drivers and irritation factors

To develop a better understanding of the mechanism of conflict between tourists, tourism suppliers and residents, desk research was conducted into potential areas of conflict between locals and tourists, which factors would characterize particularly vulnerable residents and particularly disturbing locals, and what would be strategic options to manage and control the (occurrence) of such conflicts.

There is danger that for a focus on only negative aspects in the interaction between tourists and locals would cause bias. Therefore, it should be stressed that – for the destination – tourism is not an end in itself, but primarily an economic and, second, a social potential. Economically, tourism usually has positive effects for the inhabitants, mainly through the money flowing in from the outside, which tourists spend in the city and for the city. This money leads to tourist turnover, which is reflected in income. This income can be in the form of salaries, income from self-employment, company profits, or from the leasing or sale of land, buildings or flats. Indirectly, tourism revenues also contribute to the creation and maintenance of infrastructures and (tourist) offers which can also be used by residents. This applies to most cultural institutions (from the opera to the zoo), but also for public transport offers, gastronomy, etc. Socially, tourism can lead to desirable effects in the destination as well. This includes the (simple) encounter with others (provided they are “encounters on eye”), a general stimulation and a social enrichment and liveliness of the city.

It is especially in the economic dimension, where the dilemma to which involvement with tourism could sometimes lead, becomes clear. If an apartment is rented as a holiday home rather than as a permanent living space, because the landlord will get a higher income (in some cases at lower costs and lower risk), this is undoubtedly disadvantageous for the regular tenants and land-lords of houses undoubtedly advantageous. An assessment of this dilemma is therefore not only possible based on (short-term) economic considerations, but must consider long-term and non-economic aspects. The understanding of such balancing processes and the existence of potentially positive and negative effects of tourism is fundamental to the overall further consideration.

The study of the interaction between tourists and the residents of the destination has already shown a longer academic tradition (see Harrill, 2004; Zhang *et al.*, 2006; Andereck *et al.*, 2005; Vargas-Sánchez *et al.*, 2008). However, Postma notes: "A review of the literature concerning residents' attitude toward tourism revealed an absence of research exploring factors that specifically contribute or cause irritation development, with the exception of Doxey's (1975) article and the authors who quote him or elaborated and described his model in more detail, such as Murphy (1985), Fridgen (1991), Ryan (1991), Matthieson and Wall (1982), Wall and Mathieson (2006), Vanderwerf (2008) and Milligan (1989). Based on empirical investigations he designed an irritation index, describing four stages in the development of irritation: euphoria, apathy, annoyance, and antagonism. The model of this "irridex" describes the changing attitude of residents ensuing from reciprocal impacts between tourists and residents and varying degrees of compatibility between the residents and outsiders. According to Doxey (1975) irritation differs from person to person: it is affected by various personal characteristics and various characteristics of the tourist destination.

Much literature is devoted to investigating the positive and negative impacts of tourism. Rátz and Puczkó (2002) have summarised these impacts. This overview indicates that irritation might develop along four dimensions: population impacts, transformation of the labour market, changes in community characteristics and community structure, impacts at the individual and family level, and impacts on the natural and cultural resources (Postma, 2013, p. 25) lists the socio-cultural impacts of tourism, which is the focus of this study.

Model construction

The results of the desk research were put together in a conceptual framework to conceptualise the complex issue under study, that has largely been unexplored in this way so far. The model helps to identify and visualise possible irritation points on the part of the inhabitants and their (possibly disturbing) interaction with visitors. Just like other models, this conceptual model is a schematic abstraction of reality. It takes individual, relevant aspects into account, while other aspects might be neglected. The intention is not to be complete, but to visualise reality and identify relevant issues. So, the model presented here is abstract and descriptive. It is not a scientific structure or measurement model from which statistical hypotheses can be derived, but rather a "thinking structure" for further investigation.

The overview of positive and negative possible effects of tourism on the social dimension of tourism by Rátz and Puczkó (2002) is a first starting point for the modelling process. A second starting point is the Tourist Destination Model as developed by NIT, which has been evolved throughout many years (Schmücker, 2011). Further starting points for the modelling process were reports and survey results from cities in which there have already been clearly observed annoyances among the local population because of tourism. A particularly prominent example is Barcelona (even a film was recorded), but also cities like Venice, Vienna, Amsterdam or Berlin are not only reported in the local, national and international press.

For the elaboration of a conceptual model, it is first necessary to clarify which content should be taken into account. First, the key actors: tourists and their characteristics, and residents and their characteristics. Second, attributes of the tourist product because their quantity and quality of the tourism opportunity spectrum are the prerequisite for tourists to visit the city at all. This includes both the specific tourist offer (hotel industry, semi-professional, private and sharing offers, MICE offers) as well as the offers which are aimed at both tourists and locals (cultural offers, gastronomy, mobility, etc.).

With these building blocks, the essential conflict mechanisms and concrete fields of conflict can be described, as well as strategic courses of action against the objectives of sustainable tourism development. The model is displayed in Figure 2.

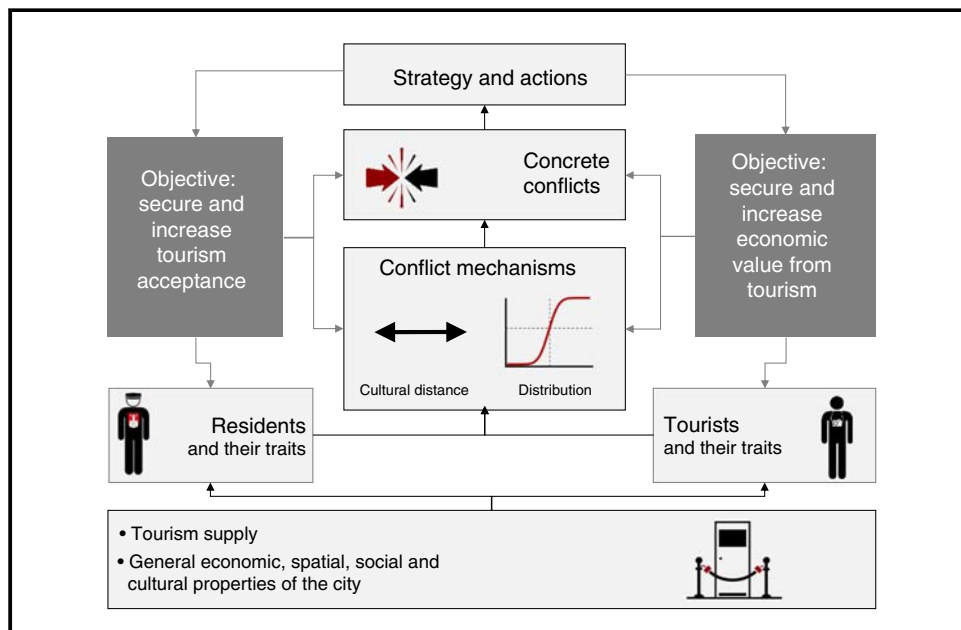
The model shows the interaction between local residents and tourists, its conditions and consequences. Conditioned by the attributes of both parties, and of conflict mechanisms between the two (sensitivity to) areas of conflict do arise. The model helps to understand how this process works. Based on intensive data collection and data analysis the model was applied in Hamburg to make an analysis of the distribution in time and space of overnight stay accommodation, events and visitor flows, the annoyance tourism caused among local residents, and the strategies that could be taken to manage tourism flows in a sustainable way. In the following sections the components of the model will be described in detail.

Relevant characteristics of tourists

Based on the literature and considerations by the researchers, the following relevant characteristics of tourism can be identified:

- “Adaptivity”: the ability of tourists to adapt to the people in the destination and their habits. “Adaptive” behaviour can be divided into general and specific. General adaptive behaviour is at work in many cultures, for example, general friendliness and restraint. Specific adaptive behaviour can include behaviour accepted by some cultures, but by others (e.g. preparing food in the hotel room or visiting sacred buildings with/without head cover). The larger the cultural distance between the locals and the tourists, the greater their adaptiveness should be to avoid conflicts.
- “Tourism culture”: it seems plausible to attribute a greater potential for irritation to tourists with certain behaviours, travel situations or group sizes than others. In particular tourist trips that are mainly aimed at enjoyment in the city. Eye-catching examples can be actions such as bachelor parties, visits to sporting events and the like. In connection with conspicuous behaviour (e.g. shouting, drinking, etc.) the irritation potential increases significantly. This behaviour is often different from home. “[It] can be labelled as a tourist culture,

Figure 2 Conceptual model of conflict drivers and irritation factors



a subset of behavioural patterns and values that tend to emerge only when the visitors are travelling but which, when viewed by local people in receiving areas, project a false and misleading image of the visitors and the societies they represent” (Postma, 2013, p. 144). Group size belongs to the same category: it can be assumed that tourists coming in (large) groups, tend to generate irritation easier than individual tourists.

- Other demographic, socio-cultural and personal characteristics: of course there are other characteristics of tourists that could cause irritation or annoyance. However, it seems plausible to consider, for example, purely demographic attributes (such as age, gender, household type and size) as background variables rather than primary features in the model. The same applies to other attributes that contribute to the adaptivity, to socio-cultural attributes (nationality, ethnicity, language, attitude to women), to socio-economic attributes (such as income and consumption patterns) and to the regional origin of the visitors. Regardless of the adaptivity, the regional origin can be a relevant driver of irritation. Even if tourists behave in a very friendly and reserved manner, their appearance may be irritating some inhabitants due to specific characteristics (such as skin colour, language/dialect or clothing). Even if there is no objective cause for complaint, strangeness as such can cause irritation.

It is important to emphasise that these background variables are not directly affecting behaviour in a direct way. Stephen Williams (2009, p. 144) comments: “The behaviour patterns of visitors often divert from their socio-cultural norms and do not accurately represent the host societies from which they originate, with conspicuous increases in levels of expenditure and consumption, or adoption of activities that might be on the margins of social acceptability at home (e.g. drinking, overeating, gambling, atypical dress codes, nudity, semi nudity)”.

Relevant characteristics of inhabitants

On the part of the inhabitants, a fairly large number of potential attributes can be identified in the literature which could influence their attitude towards the tourists.

Relevant attributes of local residents:

- demographic characteristics: gender, age, education;
- socio-economic characteristics: employment and income situation, housing situation (place of residence, duration of residence, property/rented), personal relationship to the city/district, attitude to economic growth;
- socio-psychological and socio-cultural characteristics: orientation (new vs traditional) and lifestyle, origin (born and raised or migrant, born in city or country), personality traits such as self-image and group identity; and
- tourism-specific characteristics: knowledge about tourism and its effects, income dependence from tourism, spatial distance to tourist hotspots and actual contacts with tourists, involvement in decisions about tourism development.

Harrill (2004), Zhang *et al.* (2006), Andereck *et al.* (2005), Vargas-Sánchez *et al.* (2008), Faulkner and Tideswell (1997).

Conflict mechanisms

Investigations into residents’ perceptions of tourism have been approached from several perspectives: the balance between positive and negative perceived impacts (social exchange theory), the shared social representations of tourism with other community members (social representations theory; Moscovici, 1981, 1983, 1984, 1988), the speed and intensity of tourism growth, especially in the early phases of tourism development (social disruption theory; England and Albrecht, 1984; Kang, Long and Perdue, 1996) and increasing investments and associated commodification and destruction of the landscape and idyll (theory of creative destruction (Mitchell, 1998)).

This paper contributes to understanding the (negative) perception of impacts by local residents. Within the framework of the model that is proposed, two central mechanisms can be identified that can explain the irritation of the locals by tourists:

- “Cultural Distance” as a collective term for the cultural difference between tourists and locals. It can take the form of a lack of adaptivity, appearance in (large) groups, disturbing behaviour on the part of the tourists, and a sensitivity on the part of the local (which has its roots in the factors mentioned above). Altogether, cultural distance can be understood as the socio-cultural difference between locals and tourists. The term goes back to Stephen Williams (2009): the larger the cultural distance, the greater the potential for conflict.
- Spatial and temporal distribution. This refers to the crowding (the sheer number of tourists) or the concentration of tourists in space and/or time. This crowding can lead to irritation irrespective of “cultural distance”: even with the highest degree of “correct behaviour” by highly adaptive individual tourists without further disturbing characteristics, crowding can occur.

Each aspect can potentially cause irritation on its own, but in combination the effects become potentially stronger.

Concrete fields of conflict

The components of the model described in the previous section point at conflicts in a more abstract way (which characteristics and features could lead to conflicts and how does this work in general?). This section will focus on the actual (concrete) conflict fields that can occur. The basis for the collection of these fields of conflict is derived from the illustrated antecedents, yet it is mainly about what has been reported by destinations (especially big cities) and survey results.

The numerous arguments, which are mentioned in the literature, but above all in reports and interviews on areas of conflict, can be divided into possible direct restrictions (those which are perceived at the moment of occurrence) and indirect consequences. Table I shows the concrete fields of conflict that were identified in an overview. The fields of conflict are characterised as “potential”, because it is a structured collection without any further statement as to whether and how far these are relevant to Hamburg. Moreover, it is not an overview of fears by the authors, but about fears of local residents as they experienced in their daily lives (e.g. the authors do not believe that the employment of people with an immigration background is a negative consequence of tourism).

It becomes clear that the number of possible conflict fields is large and their structure heterogeneous and not always clearly assignable. In addition, specific developments do not only impact upon the direct interests of the local residents, but also upon the relations between different tourist actors and economic groups. For example, it is not clear yet how the renting through sharing portals has an impact upon the price development in the hotel industry (Zervas *et al.*, 2016), and how much “sharing” (as opposed to businesses) there really is in the sharing economy (O’Neill and Ouyang, 2016; European Commission, 2016).

In the case of Hamburg, conflicts arose from both temporary or seasonal and permanent sources of conflict. Examples of temporary sources of conflict can be large events, but also groups of cruise passengers who flood the city during daytime in the summer season. In the Hamburg case, there are few very large events in the course of the year which can be conflicting with the interests of the inhabitants, although mitigation and management measures have been taken. But also, a permanent area of conflict can be found in the concrete case, e.g. the misbehaviour of groups of drunken or otherwise intoxicated young males (mostly), entering the red-light district around Reeperbahn.

Strategic approaches

Strategic approaches always require a clear objective in order to have any effect. In this study, two objectives are defined:

- For the residents: to secure and increase the acceptance of tourism.
- For tourists and touristic providers: to secure and increase tourist value creation.

Table I Potential areas of conflict

Indirect areas of conflict	Concrete areas of conflict
Overtourism and crowding	1. City centre, shops, shopping 2. Bus and train, train stations 3. Roads, footpaths, parking lots (bicycles and segways on the walkway) 4. Museums, cultural and leisure facilities 5. Gastronomy and clubs 6. Events, folk festivals, etc.
Inadequate behaviour	1. Noise (especially at night) 2. Waste, dirt 3. Recklessness, curiosity 4. Obtrusiveness (pocket) theft, violence 5. Drinking, drugs, party making ("vomiting and urinating")
Strangeness and lack of adaptivity	1. General: too many strangers 2. Foreign languages, lack of german knowledge 3. Lack of familiarity with tourists with rules and standards
Privacy	1. Stay in the residential area 2. Intrusion into private (e.g. look through window, ring at doors)
Direct areas of conflict	Concrete areas of conflict
General price increase	1. Public Transport 2. Shopping 3. Cultural and leisure facilities 4. Gastronomy and clubs 5. Events, folk festivals, etc.
Strangeness	1. Feeling of strangeness in one's own city in general 2. Feeling of strangeness in one's own district/neighbourhood ("always tourists around you") 3. Loss of authenticity, culture, lifestyle, habits 4. Feeling of exploitation/commercialisation of one's own hospitality
Living room	1. "Tourist gentrification" of residential and commercial space: unwanted change in the neighbourhood 2. Rising rental rates (unfair competition between permanent and holiday homes) 3. Housing shortage (<i>dito</i>)
Competition	1. Over-use of areas and infrastructures 2. Competition for residential and commercial space through high (tourism) investments
Jobs	1. Only low-skilled jobs in the tourist service 2. Many workers with migration background

Source: Adapted from Postma (2013)

Against this background, it is important to ask which measures are appropriate to achieve these goals (see also Figure 1).

Although this project is primarily aimed at the equalisation of tourism flows, further strategies and actions are conceivable that mitigate the perceived negative effects of tourism.

In the CELTH Project on visitor pressure in European cities (Koens and Postma, 2016), desk research was conducted and interviews were held with representatives from various European cities (Berlin, Munich, Lisbon, Barcelona, Copenhagen and Amsterdam). From this, various fields of action were identified and structured:

1. improved spatial distribution of visitors (Spreading visitors around the city and beyond);
2. better time distribution of visitors (time-based rerouting);
3. regulation (regulation);
4. incentives through creating itineraries;
5. improved audience segmentation (visitor segmentation);
6. making the benefit of the inhabitants clearer (make residents benefit from the visitor economy);
7. tourist offers with benefits for the inhabitants (create city experiences);
8. communicating with and involving local stakeholders;

9. communication approaches towards visitors (communicating with and involving visitors); and
10. improvement of infrastructure (Improve city infrastructure and facilities).

Each of those strategies is linked to specific actions (CELTH, 2016).

Conclusions and discussion

Currently tourism is on the rise and city tourism has a large share in this increase. The UN World Tourism Organisation anticipates a further growth during the years to come. Emerging economies play a major role in the vast increase of tourism. Driven by an increase of wealth the middle classes in these economies are discovering the world and for example, in Europe it is evident that this is causing a growing level of annoyance among residents of (urban) destinations. Because of the rise of international tourism it is likely that the situation will worsen if visitor flows are not managed properly. This requires a thorough understanding of the forces, the conditions and mechanisms at work. This paper is an attempt to contribute to this understanding by means of a case study in Hamburg and the construction of a model that could help to manage visitor flows and anticipate possible effects of potential measures. Future studies are needed to refine the model.

The model developed in this paper is a conceptual model. It is based upon desk research on and expert interviews in various European cities and a literature review. As a conceptual model, its main value lies in sorting and arranging the many possible aspects of visitor pressure occurring in city tourism. It can be (and in the case of Hamburg has been) used as a working structure to assess possible fields of conflict arising from the conflict mechanisms contained in the model. Furthermore, it is intended to help clarify the relation between stakeholders (i. e. the residents, the tourism suppliers and the visitors) and their respective objectives. Being conceptual, however, it is not intended to serve as a structural model delivering graphical representations of hypotheses or structural relationships.

Obviously, in order to assess the situation in a specific destination, the conceptual model is only one basic tool. For concrete applications, two more steps need to be taken, building on the model.

First, the concrete fields of conflict have to be identified. These fields will differ in their importance from city to city and from destination to destination. While in one city, cruise tourists flooding the city centre impose problems, it might be stag parties or beer bikes in another destination and the rise of housing prices because of increasing numbers of Airbnbs in the next. Typically, public discussion about “visitor pressure” or “overtourism” starts with one publicly visible field of conflict. The conceptual model can then help to embed this problem into a larger framework and thus prevent it from being discussed in isolation. In other cases, cities want to assess their current status and vulnerability to unbalanced tourism development. Then, the conceptual model can help to get a more holistic view to the problem.

Second, indicators and metrics have to be applied to the concrete fields of conflict. If, e.g. crowding is identified as a field of conflict, then indicators and measurement for crowding need to be found. These can be visitor counts or usage data from apps and mobile phones. If shared accommodation seems to be the problem, then the number of hosts, listings and overnights at Airbnb and other platforms can be appropriate metrics. A major drawback, however, in the current situation seems to be the lack of comparable metrics. Each city and destination has to rely on its own assessment of “how much is too much”. In terms of overnight stays in hotels, a reasonably well maintained European database exists (TourMIS). Furthermore, some methodological approaches to assess some fields of visitor pressure have been published by McElroy (2006) or Boley *et al.* (2014). However, comparable indicators and metrics specific for the field of visitor pressure are not at hand at the moment.

Third, taking action and implementing measures is a logical consequence in cases where the assessment phase has shown problems of visitor pressure. These actions might be in the fields of regulation, visitor management, pricing or communication. The model does not give suggestions as to which actions to take. It can work, however, as a guideline for the strategic objectives of

such actions, namely to secure (and possibly increase) the economic value from tourism for the city and its tourism suppliers on the one hand and to secure (and possibly increase) tourism acceptance on the residents' side on the other hand.

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